Application No.: 10/015,848
Attorney Docket No.: GB 010002

REMARKS

Introduction

Claims 1, 2, 6-11, 13 and 16-18 are pending, of which claims 1, 10 and 13 are independent. Claims 10 and 11 have been deemed allowable, and claims 9 and 18 have been objected to, but deemed allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims. Claim 14 has been canceled herein. Claims 1, 6, 7, 13, 16 and 17 and drawing FIGs. 4 and 7 have been amended herein.

Objections to the Drawings

The drawings have been objected to for not showing some text references in FIGs. 4 and 7. By this Amendment, FIGs. 4 and 7 have been amended to include additional text references as indicated. No new matter has been added by way of these amendments. Accordingly, withdrawal of the objections to the drawings is requested.

Objections to the Claims

Claims 1, 2, 6-11, 13, 14 and 16-18 were objected to due to some informalities. By this Amendment, applicants have canceled claim 14 and amended the remaining claims as indicted to attend to these informalities. Accordingly, applicants believe that the objections to the claims have been obviated, and withdrawal of the objections to the claims is requested.

Rejections under 35 U.S.C. § 103(a)

Claims 1, 2, 7, 8, 13, 14 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,459,762 (Wang) in view of IDS paper of April 22, 2002 reference AL (Fumio) and further in view of U.S. Patent No. 6,272,193 (Eglit).

Amended claim 1 of the present application recites, *inter alia*, a method comprising: determining a value of a signal, in which N previously detected bits (where N is at

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least 2) of a demodulated bit stream are used to select which one of a plurality of threshold levels against which a current demodulated bit is to be compared in a bit slicer and is to be updated using the current demodulated bit; oversampling the demodulated bit stream by a factor M, where M is an integer on the order of 20; "intermittently *integrating* at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods to generate a demodulated signal to be compared with the selected one of the threshold values" (emphasis added) and "comparing a result of the integrating with the selected threshold level; and using the *result* to update the selected threshold value." (emphasis added).

As conceded in the office action, Wang does not describe at least "intermittently *integrating* at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods to generate a demodulated signal to be compared with the selected one of the threshold values" and "comparing a result of the integrating with the selected threshold level; and using the *result* to update the selected threshold value."

Fumio does not cure the deficiencies of Wang. While Fumio does describe correcting and assimilating a threshold value, Fumio does <u>not</u> describe "intermittently *integrating* at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods to generate a demodulated signal to be compared with the selected one of the threshold values," "comparing a *result* of the integrating with the selected threshold level; and using the *result* to update the selected threshold value."

Thus Fumio does not teach, describe or provide motivation for the claimed combination of updating a selected threshold value by using a result of the integrating at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods. Consequently, any proposed hypothetical combination of Wang and Fumio does not teach, describe, or provide motivation for the claimed combination updating a selected threshold value by using a result of

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the integrating at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods.

Likewise, Eglit does not cure the deficiencies of any proposed hypothetical Wang-Fumio combination. While Eglit does describe oversampling, Eglit does not teach, describe or provide motivation for (nor is it relied upon in the office action for describing) "intermittently *integrating* at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods to generate a demodulated signal to be compared with the selected one of the threshold values," "comparing a result of the integrating with the selected threshold level; and using the *result* to update the selected threshold value."

Accordingly, applicants submit that neither Wang, Fumio nor Eglit, either taken alone, or in any proposed combination, teaches, describes or provide motivation for the invention recited by claim 1 of the present application, and thus, claim 1 is patentable over any proposed Wang-Fumio-Eglit combination.

Moreover, applicants submit that not only does any Wang-Fumio-Eglit not teach, describe or provide motivation for "intermittently *integrating* at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods to generate a demodulated signal to be compared with the selected one of the threshold values," "comparing a result of the integrating with the selected threshold level; and using the *result* to update the selected threshold value," but, in stark contrast, Wang actually teaches away from the claimed method of updating the threshold value and any proposed combination of Wang and either Fumio or Eglit to describe the claimed feature. For example, Wang describes that thresholds can be varied based on "simulation results," (see Wang at col. 2, lns. 18-21) which is very different from the claimed combination of updating a selected threshold value by using a result of the integrating at least one sample in the

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vicinity of the M/2 sample of each of at least 2 bit periods. Thus, applicants submit that any Wang-Fumio or Wang-Eglit combination is improper.

Accordingly, for this additional reason, applicants submit that claim 1 is patentable over any proposed Wang-Fumio-Eglit combination.

Each of claims 2 and 6-9 ultimately depends from claim 1, that has been shown to be patentable, and is likewise deemed to be patentable, for at least the reasons described above with respect to the rejection to claim 1.

Amended claim 13, while different in scope, recites features similar to those of claim 1, described above. For example, amended claim 13 recites "means for deriving the demodulated bit stream includes a non-continuous integrate and dump stage for integrating the demodulated bit stream over a predetermined number of bit periods and supplying a result to the variable threshold bit slicer and to the means for updating the selected threshold value."

Accordingly, applicants submit that amended claim 13 is patentable over any proposed hypothetical Wang-Fumio-Eglit combination, at least for the reasons stated above with respect to the patentability of claim 1.

Each of claims 16-18 ultimately depends from claim 13, that has been shown to be patentable, and is likewise deemed to be patentable, for at least the reasons described above with respect to the rejection to claim 13.

Claim 14 has been canceled, thus rendering the rejection to that claim moot.

Thus, applicants submit that each of the claims of the present application are patentable over each of the references of record, either taken alone, or in any proposed hypothetical combination. Accordingly, withdrawal of the rejections to the claims is respectfully requested.

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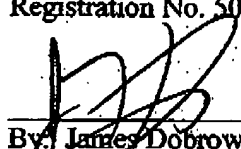Attorney Docket No.: GB 010002

Conclusion

In view of the above remarks, reconsideration and allowance of the present application is respectfully requested. If any additional fee is deemed necessary, then the Commissioner is authorized to charge such fee to Deposit Account No. 50-1358.

Respectfully submitted,

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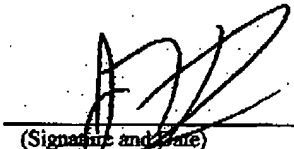Registration No. 46,666

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Amendments to the Drawings:

The attached sheets of drawings includes changes to FIGs. 4 and 7. These sheets, which include FIGs. 4 and 7, replace the original sheets including FIGs. 4 and 7. In FIGs. 4 and 7, certain text references have been added.

Attachment: Replacement sheets (2 sheets)

Annotated Sheets Showing Changes (2 sheets)

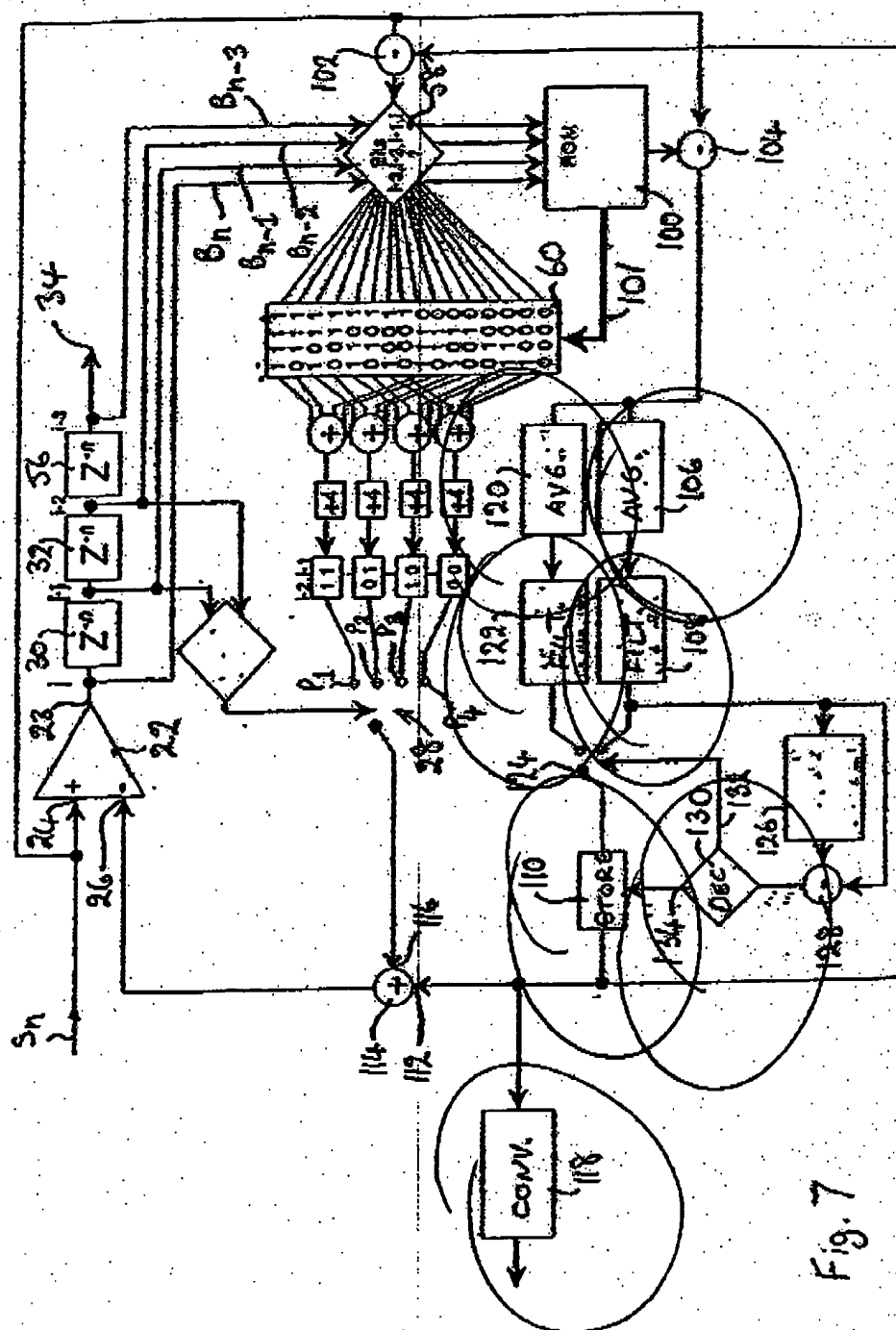APPLN. NO. 10/015,848

ANNOTATED SHEET SHOWING CHANGES

Fig. 7
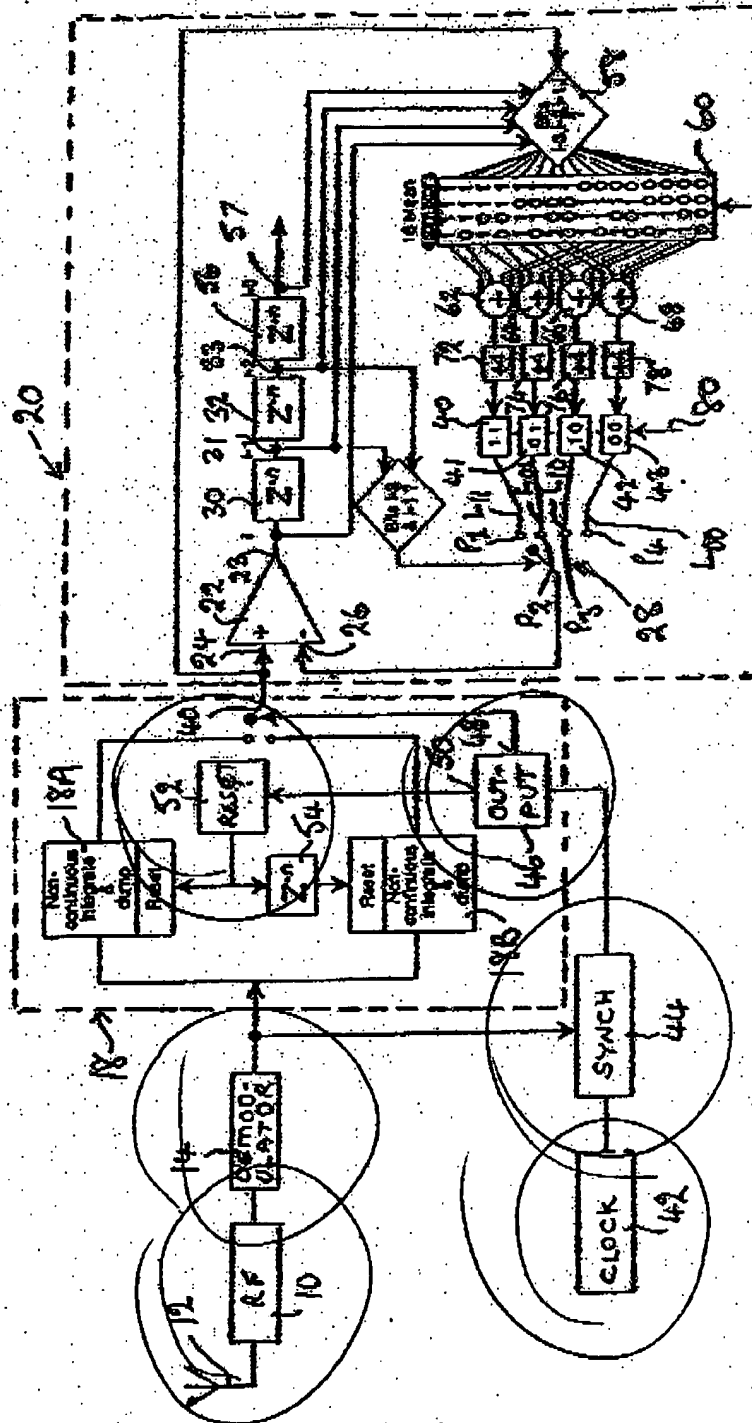
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Fig. 4

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